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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/346,412	07/01/1999	GREGORY A. JAMIESON	H16-25990	2387

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HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER	
TRAN, MYLINH T	
ART UNIT	**PAPER NUMBER**
2174	

DATE MAILED: 02/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/346,412	GREGORY JAMIESON	
	Examiner	Art Unit	
	Mylinh T Tran	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Request for Reconsideration filed on 11/*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,6-24,27 and 29-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *49-57* is/are allowed.

6)☒ Claim(s) *1,6,9-24,29,33-48 and 58* is/are rejected.

7)☐ Claim(s) *7,8,27 and 30-32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 21a 22
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Applicant's Request for Reconsideration filed 11/19/03 has been entered and carefully considered. However, arguments regarding rejections under 35.U.S.C 103 to claims (1, 6, 9-24, 29, 33-48 and 58) have not been found to be persuasive. Therefore, these claims 1, 6, 9-24, 29, 33-48 and 58 are rejected under the same ground of rejection as set forth in the Office Action mailed (08/15/03).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 6, 9-10, 16, 24, 29, 33, 41, 43 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michener et al. [US. 4,745,543] in view of Harrow et al. [US. 5,375,199].

As to claims 1, 24 and 58, Michener et al. discloses a scale extending along a gauge axis (figure 2), a graphical shape displayed along the gauge axis representative of a current value of the process variable

(column 5, lines 18-34) and one or more bars extending along the gauge axis (figure 2, (0, 10, 20, ...100 represents each bar); a first bar extending along the gauge axis, wherein a first end of the first bar is representative of an engineering hard high limit for the process variable and a second end of the first bar is representative of engineering hard low limit for the process variable (figure 2, engineering high limits (100), engineering low limits (0), column 3, lines 46-54); a second bar extending along the gauge axis, wherein a first end of the second bar is representative of an operator set high limit for the process variable (figure 2, (80, 90...S3, S4), column 5, lines 55-65); and a second end of the second bar is representative of an operator set low limit for the process variable (figure 2, (0 or 10...(S3, S4), column 5, lines 55-65). Michener shows "the engineering high and low limits define a range in which operator set high and low limits are set" and "the operator set high and low limits define a range in which the process is free to operate" at figure 2. a first pair of high and low limit elements representative of engineering hard high and low limit values (controlled variables) for the corresponding process variable (figure 2, (0-100), column 47-63) that define a range in which operator set high and low values are set (figure 2); a second pair of high and low limit elements representative of operator set high and low limit values elements (manipulated variables) (figure 2, (S3, S4), column 5, lines 56-65). The engineering high and low

limit values and the operator set high and low limit values are processed at same range (figure 2).

The differences between Michener et al. and the claim is graphical shape displayed along the gauge axis representative of a current value of the process variable. Harrow shows the feature at figure 13A. Although Harrow et al. also discloses the second pair of high and low limit elements (figure 13A, 206, 208, column 2, lines 38-44 and column 19, lines 1-10), it does not show the engineering high and low limits defining a range in which operator set high and low limits being set. It would have been obvious to one of ordinary skill in the art, having the teachings of Michener et al. and Harrow et al. before them at the time the invention was made to modify the engineering and operating limit values taught by Michener et al. to include the graphical user interface display of Harrow et al., in order to allow the user to exploit their strengths in detecting and resolving process abnormalities as taught by Harrow et al.

As to claims 6 and 29, Michener et al. teaches the second bar extending along the gauge axis representative of operator set high and low limits for the process variable extends along the gauge axis within the first bar representative of the engineering hard high and low limits for the process variable (figure 2, 20 and 80 display within 0 and 100).

As to claim 9, Harrow et al. also discloses the graphical user interface further includes user manipulation elements movable to change one or more of the high and low process limit values (column 3, lines 48-63).

As to claim 10, while Harrow et al. shows the scale extending along the gauge axis (figure 13A), Michener teaches the movement of the user manipulation elements at column 3, lines 48-63.

As to claim 16, Michener et al. shows the scale extending along the gauge axis is adjustable as a function of a current value of the process variable relative to the one or more process limits values (column 5, lines 18-65).

As to claim 33, Harrow et al. also demonstrates displaying user manipulation elements movable to change one or more of the high and low process limit values, moving such user manipulation elements to generate data representative of changed high or low process limit values; and providing such data to a controller of the process (figure 13A, 206, 208, column 2, lines 38-44, column 19, lines 1-10 and column 9, lines 24-46).

As to claim 41, Michener shows rescaling the scale extending along the gauge axis as a function of the current value of the process variable relative to the set of high and low process limit values (column 5, lines 19-65).

As to claim 43, Michener et al. teaches determining the state of the current value of the process value relative to the set of high and low process limit values includes determining whether the current value of the process variable is within the set of high and low process limit values (figure 2, column 5, lines 18-64), and determining whether the current

value of the process variable is within a certain percentage of a limit value of the set of high and low process limit values, and determining whether the current value of the process variable is a certain percentage outside of the set of high and low process limit values (column 1, lines 41-55).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-15, 17-19, 34-40, 42 and 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michener in view of Harrow and further in view of Schaefer et al. [US. 4,675,147].

As to claims 11, 12, 35, 36 and 37, the difference between Michener and the claim are the user manipulation elements include one or more manipulation pointer flags associated with operator set limits, the one or more manipulation pointer flags are draggable along the gauge axis to change such operator set limits and the user manipulation elements include one or more manipulation pointer flags associated with the engineering hard limits, the one or more manipulation pointer flags are draggable along the gauge axis to change such engineering hard limits. Schaefer et al. also shows these features at column 3, lines 50-65.

Although Schaefer et al. also teaches the engineering hard high and low limits, it does not shows the engineering high and low limits defining a range in which operator set high and low limits being set. It would have been obvious to one of ordinary skill in the art, having the teachings of Michener, Harrow and Schaefer et al. before them at the time the invention was made to modify the process variables taught by Michener and Harrow to include the pointer flags of Schaefer et al., in order to be able for user see the setting points clearly.

As to claims 13, 34, 38 and 40, Schaefer et al. demonstrates the graphical shape representative of the current value of the process variable that is a pointing device proximate to the scale (column 13, lines 46-67 and column 14, lines 1-35).

As to claim 14, Schaefer et al. teaches graphical user interface further includes at least one additional graphical shape displayed along the gauge axis representative of at least one additional value for the process variable (figure 5, column 16, lines 25-50)

As to claims 15, 17 and 39, Schaefer et al. also teaches the additional graphical shape representative of at least one additional value for the process variable that has a color of a set of colors that reflects the state of the current value for the process variable relative to the set of high and low process limit values (column 15, lines 20-32).

As to claim 18, Schaefer et al. also shows a color for the graphical shape represents one of a current value of the corresponding process variable

being within the set of high and low process limit values, the current value of the corresponding process variable being within a certain percentage of a limit value of the set of high and low process limit values, and the current value of the corresponding process variable being outside of the set of high and low process limit values (column 15, lines 20-32).

As to claim 19, while Schaefer et al. discloses a background of a region adjacent the one or more bars along the gauge axis is of a color when the graphical shape representative of the current value of the process variable is outside of the high and low process limit values, Michener teaches the region being representative of engineering physical limits of the process variable; the user low and high limit values would be inside the engineering high and low limits; and the graphical shape representative of the current value of the process variable is outside of the high and low process limit values (figure 2) (20 and 80 place inside 0 and 100).

As to claim 42, Schaefer et al. also shows displaying the graphical shape representative of the current value of the process variable includes: determining a state of the current value of the process value relative to the set of high and low process limit values and displaying the graphical shape in a color of a set of colors that reflects the state of the current value for the process variable (column 17, lines 4-49).

As to claim 44, while Schaefer et al. also teaches displaying a graphical element representative of engineering physical limits of the process variable, Michener shows determining whether the current value of the process variable is outside of the set of high and low process limit values and when the current value of the process variable is outside the set of high and low process limit values (figure 2, column 5, lines 18-64).

As to claim 45, Schaefer et al. demonstrates displaying a graphical element

representative of engineering physical limits of the process variable includes displaying a background region adjacent the one or more bars along the gauge axis in a particular color representative of engineering physical limits (column 9, lines 39-53).

Claims 20-23 and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable Michener et al. [US. 4,745,543], in view of Harrow et al. [US. 5,375,199] and further in view of van Weele et al. [US. 5,631,825].

As to claim 20, the difference between Michener, Harrow and the claim is a trend graph. van Weele et al. discloses the graphical user interface further includes a trend graph for the process variable (column 6, lines 30-35). It would have been obvious to one of ordinary skill in the art, having the teachings of Michener, Harrow et al., and van Weele et al. before them at the time the invention was made to modify the gauge

axis, the graphical shape and operator set limit for the process variables as taught by Michener et al. and Harrow to include the trend graph of van Weele et al. in order to provide data input means for selecting one of a set of preselected process primitives, and means for indicating a value for the selected process primitive and substituting the input value for that primitive as the value to be monitored and controlled by the PCC, as taught by van Weele et al.

As to claim 21, van Weele et al. also discloses the trend graph includes at least one of a historical trend graph and a prediction trend graph for displaying trend information representative of process variable values (column 14, lines 10-65).

As to claim 22, van Weele et al. teaches the trend graph includes at least one of a historical trend graph and a prediction trend graph for displaying trend information representative of process variable limits (figures 20-21, column 36, lines 35-52).

As to claim 23, while van Weele et al. teaches the manipulated and controller variables (column 35, lines 31-61), Michener shows plurality of variables of a continuous multivariable process

As to claim 46, van Weele et al. also demonstrates displaying a trend graph for the process variable with the displayed scale, one or more bars, and the graphical shape representative of the current value of the process variable (column 14, lines 11-26).

As to claim 47, van Weele et al. discloses displaying the trend graph includes displaying at least one of a historical trend graph and a prediction trend graph for the process variable representative of process variable values (column 14, lines 27-67).

As to claim 48, van Weele et al. also discloses displaying the trend graph includes displaying at least one of a historical trend graph and a prediction trend graph for the process variable representative of process variable limits (figures 20-21, column 14, lines 1-50).

Response to Arguments

Regarding claims 1, 24 and 58, Applicant has argued neither Michener et al. nor Harrow disclose "display a first bar extending along the gauge axis wherein a first end of the first bar is representative of an engineering hard high limit for the process variable and a second end of the first bar is representative of an engineering hard low limit for the process variable and further wherein the first end and second end of the first bar representative of the engineering hard high and hard low limits define a range in which operator set high and low limits are set" and "a second bar extending along the gauge axis wherein a first end of the second bar is representative of the operator set low limit for the process variable, and further wherein the first end and second end of the second bar representative of the operator set high and low limits define a range in which the process is free to operate".

However, the Examiner respectfully disagrees with the Applicant. The values 0 and 100 of figure 2 are the highest and lowest values which are set by an engineering programmer. The Applicant alleges they are not functional limit values as the Applicant explains in the specification; however, limitations from the specification are not read into the claims although the claims are interpreted in the light of the specification. So, the values (0 and 100) represent the engineering high limit and engineering low limit for the process variable. Besides, Michener et al. creates the long bar by forming 0 and 100 that extends along a gauge axis.

The operator high and low limits are created when the operator switches S3 and S4. Operation of switch S3 causes an increase in the set point value (high limit), while operation of switch S4 causes a decrease in this parameter (low limit). Again the values (80 and 20) could be the first end and the second end of the second bar by forming.

The Examiner cited Harrow for the feature of "a graphical shape displayed along the gauge axis representative of a current value of the process variable" not the part of engineering or operator high and low limits. Although Michener et al. already shows the graphical shape (figure 2), Harrow clearly shows the graphical shape displayed along the gauge axis (figure 13A). Therefore, in combination of Michener and Harrow, all the limitations as provides in the claims are taught with the

motivation being to allow the user to exploit their strengths in detecting and resolving process abnormalities.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires fax a response, (703) 872-9306, may be used for all kinds of fax.

Please label "PROPOSED" or "DRAFT" for information facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mylinh Tran whose telephone number is (703) 308-1304. The examiner can normally be reached on Monday-Thursday from 8.00AM to 6.30PM

If attempt to reach the examiner by telephone are unsuccessful, the examiner 's supervisor, Kristine Kincaid, can be reached on (703) 308-0640,

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Mylinh Tran

Art Unit 2174

SY D. LUU
PRIMARY EXAMINER